

# INSTALLATION AND MAINTENANCE INSTRUCTIONS FOR ALL ASHCROFT® BIMETAL DIAL THERMOMETERS



## GENERAL

In removing the thermometer out of the packing box, handle it by the case or case outlet. Avoid handling it by the stem.

## INSTALLATION OF THERMOMETERS

The thermometer should be mounted at any convenient location where it will be subjected to the average temperature variations to be indicated.

For an EVERYANGLE CONNECTION PLEASE REFER TO THE REVERSE SIDE OF THIS DOCUMENT before beginning the installation.

Avoid bending the stem as this will cause misalignment of the internal parts, resulting in undue frictional errors.

To tighten the thermometer to the apparatus, use a wrench applied to the hexagon head of the threaded connection located just outside of the case.

## INSTALLATION

Locate the stem so that at least two inches will be subjected to the average temperature to be measured.

Exposing the stem to a temperature in excess of the highest dial reading should be avoided.

The thermometer is normally provided with a threaded connection. To tighten the thermometer to the apparatus or into the well, use an open-end wrench applied to the hexagon head of the threaded connection. Turn until reasonably tight, then tighten still further in the same manner as a pipe elbow or similar pipe fitting until the scale is in the desired position for reading. **DO NOT TIGHTEN BY TURNING THE THERMOMETER CASE.**  
*Install the dry type thermometer so that the maximum case temperature is kept below 200°F at all times.*  
*Install the liquid filled type thermometer so that the maximum case temperature is kept below 150°F at all times.*

When a thermometer is equipped with a well, the well should be installed onto the apparatus first. The stem of the thermometer should then be coated with a heat conducting medium (a mixture of glycerin and graphite or vaseline or any other heavy lubricant may be used), after which the thermometer stem is inserted, and tightened into the well.

## CAUTION:

*Thermowells should be used on all pressurized applications, to protect the thermometer from corrosion or physical damage, and to facilitate removal of the thermometer without disturbing the process.*

## TESTING

Ashcroft Bimetal Dial Thermometers are carefully calibrated at the factory and under most operating conditions will retain their accuracy indefinitely. However, as in the case of all instruments, it is well to make periodic checks for accuracy against known standards.

## ADJUSTMENT

If it is necessary to make an adjustment to the thermometer proceed as follows:

On thermometers fitted with an "External Adjustment" – Use a small wrench, small screwdriver or a coin to turn the slotted hexagon head in the back of the case until the pointer indicates the proper temperature on the dial.

## MAINTENANCE OF DIAL THERMOMETERS

Aside from occasional testing, little or no maintenance is required.

Be sure that the gasketed glass cover is on the case at all times, as moisture and dirt inside the case will eventually cause the thermometer to lose its accuracy. (See caution note below.)

If the thermometer is used for measuring the temperature of a material that may harden and build up an insulating layer on the stem, the thermometer should be removed from the apparatus occasionally, and the stem cleaned. Observe this precaution to ensure the sensitivity of the instrument.

## CAUTION:

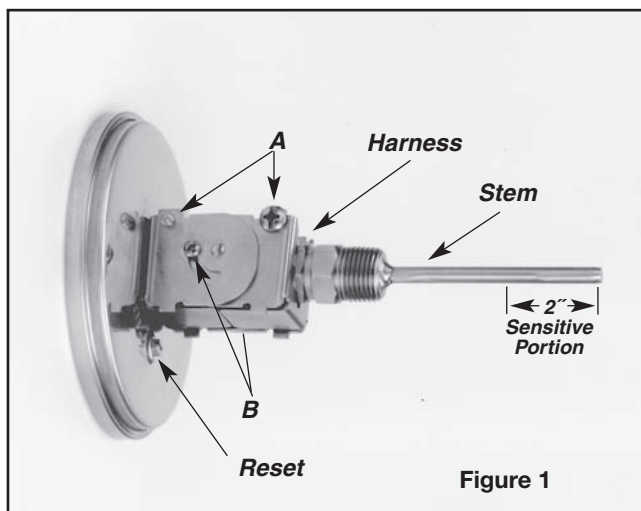
*Bimetal Thermometers operating below freezing must have a perfectly tight case to prevent entrance of moisture which eventually will condense and freeze inside the stem. This condition shows up as a failure of the thermometer to read accurately below 32°F or 0°C. For this reason it is important to avoid damage to the glass front while the stem temperature is at freezing or below. All thermometers are hermetically sealed in a dry atmosphere at the factory and require no further maintenance.*

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This thermometer was designed to be positioned to face the direction of easiest reading.



**CAUTION:** To assure longest life, the “EVERY- ANGLE” joint should be operated only when necessary during installation or removal of the thermometer.

#### POSITIONING THE STEM

Before installation, the stem should be set to the desired angle as follows:

**Figure 1:** Loosen the four screws labeled “A” and “B” in Figure 1, until the harness revolves freely without twisting the flexible housing.

**Figure 2:** While holding the case, revolve the harness clockwise or counterclockwise, as indicated by arrows in Figure 2, to place the harness in a position that will permit flexing the stem in the desired direction with respect to the case. Then lock the two screws labeled “A.”

**Figure 3:** Flex the stem to the desired angle with respect to the face of the thermometer, as shown in Figure 3, then lock the two screws labeled “B.”

#### INSTALLATION

The lower 2” of the stem is the sensitive portion. Be sure this part of the stem is exposed to the temperature to be measured.

Tighten the thermometer to the apparatus or into the thermometer well, using an open-end wrench applied to the hexagon head of the connection bushing. Turn until reasonably tight, then tighten further (in the same manner as a pipe fitting) until the scale is in the desired position for reading.

**DO NOT TIGHTEN BY TURNING THE THERMOMETER CASE OR THE HARNESS. INSTALL THE DRY TYPE EVERYANGLE THERMOMETER SO THAT THE MAXIMUM CASE TEMPERATURE IS KEPT BELOW 200°F. INSTALL THE LIQUID-FILLED TYPE EVERYANGLE THERMOMETER, SO THAT THE MAXIMUM CASE TEMPERATURE IS KEPT BELOW 150°F.**

#### THERMOMETER WELLS

When the thermometer is equipped with a well, the well should first be removed from the thermometer and screwed into the apparatus.

